What is claimed is:

1. A raffinose synthase gene which comprises a nucleotide sequence hybridizable with a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 1,

(b) the nucleotide sequence represented by SEQ ID NO: 2,

(c) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 3,

(d) the nucleotide sequence represented by the 236th to 2584th nucleotides in the nucleotide sequence represented by SEQ ID NO: 4,

(e) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 5,

(f) the nucleotide sequence represented by the 134th to 2467th nucleotides in the nucleotide sequence represented by SEQ ID NO: 6,

(g) a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 7, and

(h) the nucleotide sequence represented by the 1st to 1719th nucleotides in the nucleotide sequence represented by SEQ ID NO: 8,

under stringent conditions, and encoding a protein being capable of binding D-galactosyl group through α (1→6) bond to the hydroxyl group attached to the carbon atom at 6-position of the D-glucose

residue in a sucrose molecule to form raffinose.

2. A raffinose synthase gene comprising a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 1.

3. A raffinose synthase gene comprising the nucleotide sequence represented by SEQ ID NO: 2.

4. A raffinose synthase gene comprising a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 3.

5. A raffinose synthase gene comprising the nucleotide sequence represented by the 236th to 2584th nucleotides in the nucleotide sequence represented by SEQ ID NO: 4.

6. A raffinose synthase gene comprising a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 5.

7. A raffinose synthase gene comprising the nucleotide sequence represented by the 134th to 2467th nucleotides in the nucleotide sequence represented by SEQ ID NO: 6.

8. A raffinose synthase gene comprising a nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 7.

9. A raffinose synthase gene comprising the nucleotide sequence represented by the 1st to 1719th nucleotides in the nucleotide sequence represented by SEQ ID NO: 8.

10. A raffinose synthase gene comprising the nucleotide sequence represented by SEQ ID NO: 4, SEQ ID NO: 6 or SEQ ID NO: 8.

11. A nucleic acid comprising a partial nucleotide sequence of the raffinose synthase gene of any one of claims 1 to 10.

12. A method for detecting a nucleic acid containing a raffinose synthase gene which comprises detecting said nucleic acid by hybridization using the labeled nucleic acid of claim 11 as a probe.

13. A method for amplifying a nucleic acid containing a raffinose synthase gene which comprises amplifying said nucleic acid by polymerase chain reaction (PCR) using the nucleic acid of claim 11 as a primer.

14. A method for obtaining a raffinose synthase gene which comprises the steps of:

detecting a nucleic acid containing said raffinose synthase gene by hybridization using the labeled nucleic acid of claim 11 as a probe, and

recovering the detected nucleic acid.

15. A method for obtaining a raffinose synthase gene which comprises the steps of:

amplifying a nucleic acid containing said raffinose synthase gene by PCR using the nucleic acid of claim 11 as a primer, and

recovering the amplified nucleic acid.

16. A nucleic acid comprising a nucleic acid containing the raffinose synthase gene of any one of claims 1 to 10 which is joined to a nucleic acid exhibiting promoter activity in a host cell.

17. A vector comprising the raffinose synthase gene of any one of claims 1 to 10.

18. A transformant, wherein the raffinose synthase gene of any one of claims 1 to 10 is introduced into a host cell.

19. A transformant, wherein the nucleic acid of claim 16 is introduced into a host cell.

20. A transformant, wherein the vector of claim 17 is introduced into a host cell.

21. The transformant of any one of claims 18 to 20, wherein the host is a microorganism.

22. The transformant of any one of claims 18 to 20, wherein the host is a plant.

23. A method for producing a raffinose synthase which comprises the steps of:

culturing or growing the transformant of any one of claims 18 to 22 to produce the raffinose synthase, and

collecting the raffinose synthase.

24. A raffinose synthase comprising the amino acid sequence represented by SEQ ID NO: 1.

25. A raffinose synthase comprising the amino acid sequence represented by SEQ ID NO: 3.

26. A raffinose synthase comprising the amino acid sequence represented by SEQ ID NO: 5.

27. A raffinose synthase comprising the amino acid sequence represented by SEQ ID NO: 7.

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